# CHAPTER 1 - Introduction

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# CHAPTER 1 - Introduction

# SECTION 1 - About this Manual

## Purpose

The Office of State Project Development Procedures and Quality Improvement in the Design and Local Program (DLP) has the responsibility for the development and consistent application of Caltrans' policies for the project development process. It maintains this manual, the *Project Development Procedures Manual* (PDPM), to provide guidance for project development on State Highway System projects. Emphasis of the PDPM is directed toward State highway projects; however, projects on local transportation systems and other modes are also discussed.

## Defining the Project Development Process

For the purposes of this manual, the project development process is defined as spanning those activities and that time frame that commence with project initiation and end with the assembly of the Final Project Records after project construction.

## Historical Background

The original PDPM (Gold Book) was written to provide instructions for implementing the State highway project development process outlined in the *California Action Plan for Transportation Planning and Development*, published in June, 1973.

The Action Plan was developed in compliance with Federal requirements stated in Section 109 (h) Title 23 of the U.S. Code, and with its implementing memorandum issued by the Federal Highway Administration (FHWA). The purpose of this Action Plan was to provide a process to assure the consideration of economic, social, and environmental effects of transportation projects - in parallel with engineering and technical aspects. It provided guidelines and procedures for implementing two related pieces of legislation: the National Environmental Policy Act of 1969 (NEPA) and the California Environment Quality Act (CEQA) of 1970. The Action Plan is no longer in effect as an official document, but its basic requirements are still in force and are included in the PDPM.

## Current Release

This seventh edition of the PDPM represents a reformating of the sixth edition of the "Gold Book", with changes to bring it up-to-date with the current organization of Caltrans and other revisions to make it current. It conforms to the layout of the sixth edition, which represented an entire rewrite of the "Gold Book" that brought it up to date with current policies and legislation. It reflects the July 1988 (and subsequent)

delegations of authority for project development to the District Directors. It focuses on the integral role of Caltrans' project development philosophy as it relates to the project development process. This new release is intended to supersede all previous editions and changes to the PDPM. It is intended to complement the *Project Development Workflow Tasks Manual*, which describes "typical" project development tasks that occur during the project development process.

## PDPM Implements Laws & Policies

The PDPM reiterates many State and federal laws and policies that affect the development of transportation projects in California; however, it is United States Code or law, Executive Orders, U.S. Department of Transportation and FHWA and other federal regulations, State statutes and other State regulations, as well as Caltrans' Director's Policy Memoranda and Deputy Directives that establish the legal requirements and policies used by Caltrans to carry out project development functions. The PDPM is not intended to establish legal standard for these functions, nor does it impose legal requirements different from, or in addition to, those imposed by law. In many cases, specific statutes have been quoted; however, there has been no attempt to include a complete listing of all applicable laws or regulations.

## PDPM Provides Guidance

The processes and procedures established in this manual are provided for the information and guidance of the officers and employees of Caltrans, as well as for any local entity, private developer, or consultant engaged in project development activities involving California state highways. It is not intended that any standard of conduct or duty toward the public shall be created or imposed by this manual.

Statements specifying duties and responsibilities of any given classification of officers or employees mentioned herein refer solely to duties or responsibilities of such classification to their management, to various members of the project development team, or to their relationships with organizational units in Caltrans.

There is also no intent to impose organizational requirements on any Caltrans district beyond that which is already established by the Caltrans Policy process.

## Special Situations

Many of the processes and procedures in this manual are subject to change as circumstance and experience warrant. Special situations may dictate a prudent variation (within legal limitations) from a requirement; such a variation is subject to approval by the District Director, by the DLP Program Manager (if specifically required), or by some other approval authority (where specifically provided for).

## Mandatory Procedural Requirements

Within the constraints described above, this manual uses the word "must" to indicate mandatory project development procedures and policies for which Caltrans is responsible. Procedures and actions to be performed by others (subject to notification by Caltrans), or statements of fact, are indicated by the word "will". Other procedural statements in the manual are meant to be descriptive of the recommended or customary process and use a nonmandatory verb.

# SECTION 2 - Related Manuals and Guidelines

## DLP Manuals and Guidelines relating to project planning and design

In addition to the *Project Development Procedures Manual (PDPM)*, DLP is responsible for the following manuals and guidelines:

- ***Bikeway Planning and Design Guidelines***

  Contains selected portions of the HDM for those whose primary mission is the planning and design of bicycle facilities.

- ***Caltrans Media Handbook***

  Provides guidelines for relating to the media.

- ***Caltrans Storm Water Quality Handbooks Planning and Design Staff Guide***

  Provides a guide for incorporating storm water quality controls into a project.

- ***Cooperative Agreement Manual (CAM)***

  Covers procedures for Cooperative Agreements with local agencies, as well as highway agreements with private parties.

- ***Guidelines for Consultant Oversight***

  Covers oversight of work by others on state facilities to ensure that the work conforms to Caltrans standards and practices.

- ***Guidelines for the Official Designation of Scenic Highways***

  Describes the Scenic Highway Program and how to apply for Scenic Highway designation. -- Prepared by the Office of State Landscape Architecture in the DLP.

- ***Highway Design Manual (HDM)***

  Provides guidance on design standards, policies, and procedures that are to be followed on projects on the State Highway System.

- ***Landscape Architecture Project Plan Standards***

  Establishes uniform standards and procedures for preparation of Landscape Architecture project plans. -- Prepared by the Office of State Landscape Architecture in the DLP.

- ***Local Assistance Procedures Manual***

  Outlines policy and procedures for project development for local Federal-aid and local State-aid projects on local-agency transportation systems. -- Prepared by the Office of Local Programs, Procedures Development in the DLP.

- ***Manual for Applying the CTC's Policy Guidelines for Funding Interchanges & Crossings***

  Provides guidelines on interchange cost-sharing.

- ***Policy on High and Low Risk Underground Facilities within Highway Rights of Way***

  Covers the mandatory standards and procedures for placement and protection of underground utility facilities within highway rights of way and for the safe conduct of highway workers.

- ***Procedures Manual for Special-Funded State Highway Projects***

  Covers the policies and procedures for developing special-funded projects on the State Highway System. -- Prepared by the Office of Local Programs, Procedures Development in the DLP.

- ***Project Development Workflow Tasks Manual (PDWTM)***

  Provides flowcharts and detailed descriptions of project development tasks from project initiation through Final Report on the completed project. It is designed to be used independently or as a companion to the PDPM.

**Other Caltrans Manuals and Guidelines**

Other manuals and guidelines applicable to the project development process are also referenced in this manual. They include:

- ***A&E Consultant Services Manual***

  Provides guidance for Caltrans staff when developing consultant contracts for architectural and engineering (A&E), environmental, and related technical services involved in project delivery. -- This manual is the responsibility of the Office of

Service Contracts in the Administrative Service Center. The portion on consultant oversight is the responsibility of DLP.

- ***Basic Engineering Estimating System (BEES)***

  Provides aid to the Project Engineer in the preparation of the estimate of cost.
  -- Issued by the Information Systems and Service Center.

- ***Bridge Manuals:***

  -- Issued by the Office of Structures Design, in the Division of Structures in the Engineering Service Center:

  – *Bridge Memo to Designer's Manual (Volume 1)*
  Contains policy and procedures related to the structure design.
  – *Bridge Design Aids Manual*
  Contains structures estimating procedures and forms.
  – *Bridge Design Practice Manual*
  Contains bridge-design aesthetics considerations in selection of structure-type.
  – *Bridge Design Details Manual*
  Contains instructions for preparing structures plans for the PS&E.

- ***Briefing Package on Capital Outlay Support Work Breakdown Structure (WBS) Resource Breakdown Structure (RBS):***

  *Provides information on the Resource Breakdown Structure. -- Prepared by the Project Management Program.*

- ***CADD Users Manual***

  Establishes uniform data-entry procedures for roadway design and drafting work performed on the Caltrans computer-aided design and drafting (CADD) system.
  -- Prepared by the Office of Engineering Technology in the Engineering Service Center.

- ***Coding Manual*** *(Volume 1)*

  Contains codes and coding procedures used for the accounting and management system. -- Prepared by the Accounting Service Center.

- ***Construction Manual***

  Establishes policies and procedures for the construction phase of contract work. Describes the duties of field personnel assigned to construction projects.
  -- Prepared by the Office of Program Policy, Construction Program.

- ***Drafting and Plans Manual of Instructions***

  Provides guidance in the preparation of engineering drawings. -- Prepared by the Office of the Office Engineer in the Engineering Service Center.

- ***Encroachment Permits Manual***

  Establishes uniform methods and procedures for issuing encroachment permits. -- Prepared by the Office of Commercial Vehicle Operations and Permits of the Traffic Operations Program.

- ***Engineering Service Center Service Directory***

  Provides an overview of services provided. -- Prepared by the Office of Program/Project Management and Support, of the Engineering Service Center.

  Discusses social, economic, and environmental considerations that are an integral but specialized part of the highway development process. Detailed policies and procedures are included. -- Prepared by the Environmental Program.

- ***Guide to Caltrans Capital Outlay Support Work Breakdown Structure***

  Describes the Work Breakdown Structure to be used for all capital outlay support work. -- Prepared by the Project Management Program.

- ***High Occupancy Vehicle (HOV) Guidelines***

  Covers the development of HOV facilities. -- Prepared by the Traffic Operations Program, in cooperation with DLP.

- ***Highway Maintenance Manual***

  Describes procedures relating to the maintenance of State highways. -- Prepared by the Maintenance Program.

- ***Intergovernmental Review: Program Guidelines and Handbook***

  Used to guide Caltrans reviews and comments on the environmental documents of development proposals, plans, programs, and projects of other agencies. -- Prepared by the Planning Program.

- ***Maintenance Station Design Manual***

  Covers the development of highway maintenance stations. -- Prepared by the Office of Structures Design, in the Division of Structures in the Engineering Service Center.

- ***Major Damage Restoration Coordinator's Handbook***

  Contains reference material to assist in development of major damage restoration projects. -- Prepared by the Office of Roadway Maintenance, in the Maintenance Program.

- ***Photogrammetric Products & Services***

  Describes how to obtain mapping and other services. -- Prepared by the Photogrammetry Section of the Geometronics Branch in the Office of Engineering Technology, in the Engineering Service Center.

- ***Plans, Specifications, and Estimates Guide***

  Developed to establish uniform procedures for preparation of PS&E submittals for all projects on the State Highway System. -- Prepared by the Office of the Office Engineer, in the Engineering Service Center.

- ***Project Candidate List Development Manual***

  Gives instructions for preparing priority rating of all projects that are candidates for State programming. - Prepared by the Programming Program.

- ***Project Management Control System (PMCS) Users Manual***

  Describes the Project Management Control System and PYPSCAN (Person Year, and Project Schedule, and Cost Analysis). -- Prepared by the Office of Project Management Control Systems in the Project Management Program.

- ***Project Management Procedures Manual***

  Contains procedures for project management and evaluation. -- Prepared by the Project Management Program.

- ***Ramp Meter Design Guidelines***

  Covers development of ramp metering facilities. -- Prepared by the Traffic Operations Program, in cooperation with DLP.

- ***Regional Transportation Plan Guidelines***

  Used by Regional Transportation Planning Agencies to prepare their regional transportation plans. -- Prepared by the Planning Program.

- ***Right of Way Manual***

  Covers policies and procedures relating to right of way requirements.
  -- Prepared by Right of Way Program.

- ***Safety Manual***

  Contains Safety and health practices to be used on the job. -- Prepared by the Office of Safety, in the Administrative Service Center.

- ***Service Contracts Manual*** and
  ***Service Contracts Managers Manual***

  Provides procedures for preparing and administering contracts for services, including "Minor B" contracts. -- Prepared by the Office of Service Contracts, in the Administrative Service Center.

- ***Standard Plans*** and
  ***Standard Specifications***

  Used to prepare a Plans, Specifications, and Estimate (PS&E) for projects on the State Highway System. -- Prepared by the Office of the Office Engineer in the Engineering Service Center.

- ***Standard Test Methods*** *(Volume 1)*

  Contains the "Materials Report Outline" under California Test 130. -- Issued by the Office of Materials Engineering and Testing Services, of the Engineering Service Center.

- ***Surveys Manual***

  Contains surveying procedures. -- Prepared by the Geometronics Branch of the Office of Engineering Technology, in the Engineering Service Center.

- ***System Planning Guidelines***

  Gives instructions for the preparation of documents used by Caltrans to fulfill its statutory requirements for long-range transportation planning. -- Prepared by the Planning Program.

- ***Transportation Management Plan Guidelines***

  Establishes procedures and responsibilities for preparing Transportation Management Plans during project development. -- Prepared by the Office of Traffic Operational Systems, in the Traffic Operations Program.

- ***Traffic Manual***

  Covers signing, traffic controls, signals, illumination, and highway operations. -- Prepared by the Traffic Operations Program.

- ***Traffic Systems Management Program Guidelines***

  Gives instruction for any agency applying for Traffic System Management (TSM) Program funding for a TSM project. -- Prepared by the Traffic Operations Program and adopted by the California Transportation Commission.

**Other Manuals and Guidelines**

Other publications applicable to the project development process are also referenced in this manual. They include:

- ***California Permit Handbook***

  A guide to major local, state and federal permit requirements intended to assist project applicants, public agencies and concerned citizens. -- Prepared by the Office of Permit Assistance in the Trade and Commerce Agency.

- ***Highway Capacity Manual***

  Describes capacity analysis techniques. -- Published by the Transportation Research Board as "Special Report 209".

- ***Storm Water Quality Handbooks***

  **Maintenance Staff Guide** -- guidance for CT maintenance supervisors and superintendents on operational and facility best management practices.

  **Construction Staff Guide** -- guidance for CT inspectors, resident engineers and other construction staff on (a) construction best management practices and (b) requirements of contractors for stormwater permit compliance.

  **Planning and Design Guide** -- guidance for CT planning and design staff on stormwater permit compliance in the preparation of projects for field construction.

  **Construction Constructors Guide and Specifications** -- guidance for contractors and their office/field employees for contractual and regulatory compliance with stormwater permit requirements.

# SECTION 3 - Acronyms used in this Manual

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|---|---|
| **AA** | Affected Agency |
| **AADT** | Average Annual Daily Traffic |
| **AASHTO** | American Association of State Highway Transportation Officials |
| **AC** | Asphalt Concrete |
| **ACHP** | Advisory Council on Historic Preservation (Federal) |
| **ACR** | Assembly Concurrent Resolution |
| **ADA** | Americans with Disabilities Act (Federal) |
| **ADT** | Average Daily Traffic |
| **A&E** | Architectural and Engineering |
| **AIS** | Appearance Information Sheet |
| **ANAC** | Approaching Noise Abatement Criteria |
| **APCD** | Air Pollution Control District |
| **APE** | Area of Potential Effects |
| **AQMD** | Air Quality Management District |
| **ASC** | Accounting Service Center(Caltrans HQ) |
| **BCDC** | (San Francisco) Bay Conservation and Development Commission (State: Districts 4 & 10) |
| **BEES** | Basic Engineering Estimating System |
| **BMP's** | Best Management Plans |
| **BR** | Bridge Restoration and Replacement Program (Federal) |
| **CA** | Certification Acceptance |
| **CAAA** | Clean Air Act Amendments (Federal) |
| **CADD** | Computer-aided Design and Drafting |
| **CAH** | Controlled Access Highway |
| **CALNET** | California Integrated Telecommunications Network |
| **CAM** | Cooperative Agreement Manual |
| **CAR** | Cooperative Agreement Report |
| **CCC** | California Coastal Commission (State) |
| **CCO** | Contract Change Order |
| **C-D** | Collector-Distributor |
| **CDF** | California Department of Forestry (State) |
| **C-E** | Construction Evaluated |
| **CE** | 1. Categorical Exclusion (Federal)<br>2. Categorical Exemption (State) |
| **CEC** | Caltrans Encroachment Committee (Obsolete) |
| **CEQA** | California Environmental Quality Act (State) |
| **CFR** | Code of Federal Regulations |
| **CHD** | County Health Department |

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|---|---|
| **CHP** | California Department of Highway Patrol (State) |
| **CIWMB** | California Integrated Waste Management Board (State) |
| **CMA** | Congestion Management Agency |
| **CMAQ** | Congestion Mitigation and Air Quality Program (Federal) |
| **CMP** | Congestion Management Program |
| **CO** | County |
| **COG** | Council of Governments |
| **CPH** | California Permit Handbook |
| **CPM** | Critical Path Method |
| **CRP** | Community Relations Plan |
| **CRR** | Commuter Rail Program (State) |
| **CSP** | Capital Scheduling Plan |
| **CT** | Caltrans |
| **CTC** | California Transportation Commission (State) |
| **CTP** | California Transportation Plan |
| **DAF** | Damage Assessment Form (Federal) |
| **DBA** | Decibel-A Scale |
| **DBE** | Disadvantaged Business Enterprise |
| **DBR** | Discretionary BR (Federal) |
| **DD** | District Director |
| **DDC** | District Division Chief |
| **DED** | Draft environmental document |
| **DEIR** | Draft Environmental Impact Report (CEQA) |
| **DEIS** | Draft Environmental Impact Statement (NEPA) |
| **DFG** | Department of Fish and Game (State) |
| **DHV** | Design Hourly Volume |
| **DI** | Delay Index |
| **DIS** | Design Intent Statement |
| **DLP** | Design and Local Program (Caltrans HQ) |
| **DOD** | Department of Defense (Federal) |
| **DOE** | District Office Engineer |
| **DOS** | Division of Structures of the ESC (Caltrans HQ) |
| **DOT** | Department of Transportation (Federal) |
| **DPR** | Draft Project Report |
| **DRIS** | Draft Relocation Impact Study/Statement |
| **DSA** | Division of State Architect, Department of General Services (State) |
| **DSMP** | District System Management Plan |
| **DTM** | Digital Terrain Model |
| **EA** | 1. Environmental Assessment (NEPA)<br>2. Expenditure Authorization |
| **EAG** | Encroachment Advisory Group |
| **EB** | Eastbound |
| **ED** | Environmental document |

| | |
|---|---|
| **EDP** | Electronic Data Processing |
| **EEM** | Environmental Enhancement and Mitigation (State) |
| **EH** | Environmental Handbook |
| **EIR** | Environmental Impact Report (CEQA) |
| **EIS** | Environmental Impact Statement (NEPA) |
| **EPA** | Environmental Protection Agency (Federal) |
| **ER** | Emergency Relief Program (Federal) |
| **ESAL** | Equivalent Single-Axle Loads |
| **ESC** | Engineering Service Center (Caltrans HQ) |
| **ETW** | Edge of Traveled Way |
| **FA** | Fire Agency |
| **FAA** | Federal Aviation Administration (Federal) |
| **FAPG** | Federal-aid Program Guide (Federal) |
| **FAS** | Federal-aid Secondary (obsolete) |
| **FAU** | Federal-aid Urban (obsolete) |
| **FCA** | Fire Control Agency |
| **FCR** | Flexible Congestion Relief Program (State) |
| **FED** | Final environmental document |
| **FEIR** | Final Environmental Impact Report (CEQA) |
| **FEIS** | Final Environmental Impact Statement (NEPA) |
| **FEMA** | Federal Emergency Management Agency (Federal) |
| **F&E System** | Freeway and Expressway System |
| **FHWA** | Federal Highway Administration (Federal) |
| **FONSI** | Finding of No Significant Impact (NEPA) |
| **FRIS** | Final Relocation Impact Study/Statement |
| **FSTIP** | Federal State Transportation Improvement Program (Federal) |
| **FTA** | Federal Transit Administration (Federal) |
| **FTIP** | Federal Transportation Improvement Program (Federal) |
| **F.Y.** | Fiscal Year |
| **GIS** | Geographic Information System |
| **GS** | (Department of) General Services (State) |
| **HDM** | Highway Design Manual |
| **HES** | Hazard Elimination Safety Program (Federal) |
| **HIA** | Highway Improvement Agreement |
| **HOV** | High-Occupancy Vehicle |
| **HP** | Highway Planting |
| **HP&R** | Highway Planting and Restoration |
| **HPSR** | Historic Properties Survey Report |
| **HQ** | Caltrans Headquarters |
| **HW** | Hazardous Waste |
| **HWMP** | Hazardous Waste Management Plan |
| **IC** | Interstate Completion Program (Federal) |

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|---|---|
| **IFA** | involved federal agency |
| **IGR** | Intergovernmental Review |
| **IM** | Interstate Maintenance Program (Federal) |
| **IRR** | Intercity Rail Program (State) |
| **IRRS** | Interregional Road System (State) |
| **IRS** | Interregional Road System Program (State) |
| **IS** | Initial Study (CEQA) |
| **ISA** | Initial Site Assessment |
| **ISTEA** | Intermodal Surface Transportation Efficiency Act of 1991 (Federal) |
| **ITMS** | Intermodal Transportation Management System |
| **KP** | Kilometer Post |
| **LA** | 1. Local Agency<br>2. Landscape Architect |
| **LAAPS** | Local Agency Automated Pay System |
| **LAQMD** | Local Air Quality Management District |
| **LCC** | Local Coastal Commission |
| **LEDPA** | Least Environmentally Damaging, Practicable Alternative |
| **LEQ** | Equivalent Sound Level |
| **LOC** | Locally Funded State Highway Projects |
| **LOS** | level of service |
| **LTC** | Local Transportation Commission |
| **METS** | Office of Materials Engineering and Testing Services, of the ESC (Caltrans HQ) |
| **MHHW** | Mean Highest High Water |
| **MIS** | Major Investment Study |
| **MOA** | Memorandum of Agreement |
| **MOU** | Memorandum of Understanding |
| **MPO** | Metropolitan Planning Organizations |
| **MSA** | Management Systems Activities |
| **MTMC** | Military Traffic Management Command (Federal) |
| **NAAQS** | National Ambient Air Quality Standards |
| **NAC** | Noise Abatement Criteria |
| **NB** | Northbound |
| **NBSSR** | Noise Barrier Scope Summary Report |
| **ND** | Negative Declaration (CEQA) |
| **NPDES** | National Pollutant Discharge Elimination System |
| **NEPA** | National Environmental Policy Act (Federal) |
| **NH** | National Highway System Program (Federal) |
| **NHS** | National Highway System |
| **NOD** | Notice of Determination (CEQA) |
| **NOI** | Notice of Intent (NEPA) |
| **NOP** | Notice of Preparation (CEQA) |
| **OA** | Obligation Authority (Federal) |

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|---|---|
| **OC** | Overcrossing |
| **OHC** | Other Highway Construction Program (State) |
| **OJT** | On-the-job Training |
| **OLPPD** | Office of Local Programs, Procedures Development, of the DLP(Caltrans HQ) |
| **OOE** | Office of Office Engineer, of the ESC (Caltrans HQ) |
| **OPR** | Office of Planning and Research (State) |
| **OSD** | Office of Structure Design, of the ESC (Caltrans HQ) |
| **OSF** | Office of Structure Foundations, of the ESC (Caltrans HQ) |
| **OSLA** | Office of State Landscape Architecture, of the DLP(Caltrans HQ) |
| **OSM&I** | Office of Structures Maintenance and Investigations, of the ESC (Caltrans HQ) |
| **PAR** | 1. Project Approval Report (obsolete)<br>2. Project Authorization Request (obsolete) |
| **PC** | Personal Computer |
| **PCC** | Portland Cement Concrete |
| **PCR** | Project Change Request |
| **PD** | Project Development |
| **PDPM** | Project Development Procedures Manual |
| **PDT** | Project Development Team |
| **DU** | Design Unit |
| **PDWTM** | Project Development Workflow Tasks Manual |
| **PE** | Project Engineer |
| **PEE** | Preliminary Environmental Evaluation |
| **PEER** | Permit Engineering Evaluation Report |
| **PHF** | Project History File |
| **PIR** | Project Information Report |
| **PISA** | Project Information Systems and Analysis |
| **P.M.** | Post Mile (obsolete) |
| **PM** | Project Manager |
| **PMCS** | Project Management Control System |
| **PMP** | Project Management Program (Caltrans HQ) |
| **PMPM** | Project Management Procedures Manual |
| **PMS** | Pavement Management System |
| **PPNO** | Planning Program Number |
| **P & PPR** | Permit and Port Planning Regulations |
| **PR** | Project Report |
| **PS&E** | Plans, Specifications, and Estimate |
| **PSR** | Project Study Report |
| **PSSR** | Project Scope Summary Report |
| **PSTIP** | Proposed State Transportation Improvement Program |
| **PUC** | Public Utilities Commission (State) |

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|---|---|
| **PUMS** | PYPSCAN Unit II Monitoring System |
| **PY** | Person Year |
| **PYPSCAN** | Person Year and Project Schedule and Cost Analysis |
| **RAD** | Remedial Action Design |
| **RAP** | 1. Relocation Assistance Program<br>2. Remedial Action Plan |
| **RAS** | Rehabilitation and Safety Program (State) |
| **RCE** | Registered Civil Engineer |
| **RCR** | Route Concept Report |
| **RE** | Resident Engineer |
| **RFP** | Request For Proposal |
| **RFQ** | Request For Qualifications |
| **RI** | Remedial Investigation |
| **RICS** | Remote Irrigation Control System |
| **RIS** | Relinquishment Information Sheet |
| **ROD** | Record of Decision (NEPA) |
| **RON** | Resolution of Necessity |
| **ROWM** | Right of Way Manual |
| **RR** | Railroad |
| **RRR** | Resurfacing, Restoration, Rehabilitation (3R) |
| **RRRR** | Resurfacing, Restoration, Rehabilitation, Reconstruction (4R) |
| **RSTP** | Regional Surface Transportation Program (Federal) |
| **RTIP** | Regional Transportation Improvement Program |
| **RTL** | Ready to List |
| **RTP** | Regional Transportation Plan |
| **RTPA** | Regional Transportation Planning Agency |
| **RU** | Responsible Unit |
| **R/W** | Right of Way |
| **RWQCB** | Regional Water Quality Control Board (State) |
| **SAM** | State Administrative Manual |
| **SAVE** | Society of American Value Engineers |
| **SB** | Southbound |
| **SCR** | Senate Concurrent Resolution |
| **SDR** | Site Damage Report |
| **SFPC** | Special Funded Project Coordinator |
| **SFY** | State Fiscal Year |
| **S&H Code** | Streets and Highways Code (State) |
| **SHELL** | State Highway Extra Legal Load |
| **SHOPP** | State Highway Operation and Protection Program (formerly HSOPP) |
| **SHPO** | State Historic Preservation Officer (State) |
| **SI** | Site Investigation |
| **SI** | Safety Index |
| **SIP** | State Implementation Plan |

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|---|---|
| **SLC** | State Lands Commission (State) |
| **SLTPP** | State/Local Transportation Partnership Program (State) |
| **SMARA** | Surface Mining and Reclamation Act (State) |
| **SR** | Senate Resolution |
| **SRRA** | Safety Roadside Rest Area |
| **SRTP** | Short Range Transit Plan |
| **STIP** | State Transportation Improvement Program |
| **STP** | Surface Transportation Program (Federal – formerly FAU or FAS) |
| **STRAIN** | Structures Replacement And Improvement Needs |
| **SW** | Soundwall Program (State) |
| **SWPPP** | Storm Water Pollution Prevention Plan |
| **TASAS** | Traffic Accident Surveillance Analysis System |
| **TCI** | Transit Capital Improvement Program (State) |
| **TCS** | Transportation Corridor Study |
| **TEA** | Transportation Enhancement Activities Program (Federal) |
| **TI** | Traffic Index |
| **TIP** | Transportation Improvement Program |
| **TMP** | Transportation Management Plan |
| **TRAMS** | Transportation Accounting Management System |
| **TRB** | Transportation Research Board |
| **TSDP** | Transportation System Development Program |
| **TSIP** | Transportation System Information Program (Caltrans HQ) |
| **TSM** | Traffic Systems Management |
| **TSMP** | Traffic Systems Management Plan |
| **U.S.** | United States |
| **UC** | Undercrossing |
| **UNPAR** | Un-Project Authorization Request |
| **URR** | Urban Rail Transit Program (State) |
| **USC** | United States Code (Federal) |
| **USCE** | United States (Army) Corps of Engineers (Federal) |
| **USCG** | United States Coast Guard (Federal) |
| **USGS** | United States Geologic Survey (Federal) |
| **VA** | Value Analysis |
| **VE** | Value Engineering (obsolete) |
| **WASHTO** | Western Association of State Highway Transportation Officials |
| **WB** | Westbound |
| **WBE** | Women's Business Enterprise |

# SECTION 4 - Transportation Planning Leads to Project Development

## ARTICLE 1 - General

### Planning Coordination

System and regional transportation planning analysis and studies precede initiation of studies of a specific transportation improvement project. These activities coordinate State transportation planning with local and regional transportation planning activities. These state and regional planning activities result in the identification of transportation issues and needs; proposed service, or project alternatives, to respond to issues and needs; agreement among the interested parties on the appropriate course of action; and consensus of the public and other agencies.

### Region and System Planning

Regional transportation planning facilitates the development of long-range transportation plans in metropolitan and in non-metropolitan areas. Transportation system planning is critical to identifying State issues and interests on and off the State Highway System. Together regional and system planning provide the State the ability to assess the performance of transportation facilities and systems, propose resolution and seek consensus.

### ISTEA

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) expands the federal planning requirements in Title 23 of the United States Code. The ISTEA increases the inter-modal and multi-modal aspects of transportation planning. It provides a more level basis to assess and evaluate alternative modes and projects and seek consensus. Some of the features of the ISTEA include requirements for management systems, a State Transportation Plan, and fiscal constraint.

## ARTICLE 2 - Transportation Systems

### Transportation Systems

Transportation systems are identified and defined by the State legislature, other government agencies such as cities or counties, public mass transit operators, and by private corporations, such as railroad companies.

Specific agencies or corporations are usually responsible for developing, operating, maintaining and revising the system, and for tort liability. Caltrans as the owner-operator is responsible for State highways. Caltrans is involved with other transportation systems as well, not as an owner-operator, but as a partner in coordinating and formulating policy planning and funding.

## Roadway Systems

Other roadway systems have been defined in addition to the State Highway System, including: county roads; city streets; forest highways; public lands roads; park, reservation, campus, and institution's roadway systems; regional bike trails; and private roads. The owner-operators of roadway systems are responsible for the transportation facility but not for providing or operating the vehicles on it.

## State Highway System

Locations for the construction of new State highways or for the maintenance of existing roads as State highways are adopted by the California Transportation Commission (CTC) between the termini established by law. There are approximately 269 State Highway Routes that comprise the State Highway System, described in Sections 301 through 632 of the Streets and Highways Code.

## Subsystems

Subsystems of the State Highway System are defined in Statute:

- The Freeway and Expressway System routes are listed in Sections 253.1 through 253.8 of the Streets and Highways Code.

- The Scenic Highway System, routes are listed in Sections 263.1 through 263.8 of the Streets and Highways Code.

- The Interregional Road System, routes are listed in Sections 164.10 through 164.20 of the Streets and Highways Code.

To date, none of these sub-systems, nor the State Highway System, are complete. Rather, these systems and sub-systems represent the authorized facility to be developed as conditions and funding allow.

## Federal Systems

The federal government has defined highway systems. The-federal systems are used for funding purposes and for defining the standards required to qualify for the funding. Owner-operator responsibility remains with the State. These systems are described as follows:

- The Interstate System (I), the National System of Interstate and Defense Highways, is included in its entirety in the National Highway System.

- The National Highway System (NHS) was established to focus Federal resources on roads that are the most important to interstate travel and national defense, that connect with other modes of transportation, and that are essential for international commerce. Congress approved the specific routes that comprise the NHS by enacting the National Highway System Designation Act of 1995. This Act designated those routes on the map entitled "Official Submission, National Highway System, Federal Highway Administration:" dated November 13, 1995. This designation did not include certain intermodal connectors which were allowed an additional 180 days for designation. Intermodal connectors include connectors to major ports, airports, international border crossings, public transportation and transit facilities, interstate bus terminals and rail and other intermodal transportation facilities, and most of these are not state highways. The 1996 *Route Segment Report* identifies the state highway route segments that are on the National Highway System and the Interstate System.

- Functional Classification identifies Principle Arterials as well as other functional classifications by Caltrans. Functional system characteristics are discussed in the American Association of State Highway and Transportation Officials (AASHTO) publication entitled "A Policy on Geometric Design of Highways and Streets." The 1996 *Route Segment Report* identifies the functional classification of the state highway route segments.

# ARTICLE 3 - Regional and System Planning

## Continuing, Comprehensive, Cooperative Planning

Under federal law, states must carry out a continuing, comprehensive, cooperative and intermodal statewide transportation planning process.

This includes development of a state-wide transportation plan and a State Transportation Improvement Program (see PDPM Chapter 4 for programming) that facilitates the efficient, economic movement of people and goods in all areas of the state. The State Transportation Plan outlines a range of transportation options for moving both passengers and freight by and through all modes and connections. The State, in cooperation with participating organizations including Metropolitan Planning Organizations (MPOs) (see Figure 1) and other Regional Transportation Planning Agencies (RTPAs) (see Figure 2), Native American tribal governments, environmental resource and permit agencies and public transit operators, provides for a fully coordinated process.

## State System Planning

Caltrans conducts long-range transportation System Planning for the purpose of informing and guiding state, regional and local planning, programming and operational decision makers. To this end, System Planning: 1) develops strategies for operating and improving the state highway system; 2) identifies, analyses, and recommends improvements to the state highway system and the larger multimodal and intermodal transportation system; and 3) provides the sound technical basis for tiered decision making leading to needed projects, facilities, and services.

Caltrans conducts long-range state highway System Planning to identify future highway improvements and new transportation corridors (Government Code Section 65086) in cooperation with its planning partners. System planning facilitates the efficient, economical, and intermodal movement of people, goods and information. System :Planning is part of a continuing, cooperative, and comprehensive statewide transportation planning process that responds to federal law (Title 23 United States Code Section 135). System Planning strives for interregional and statewide continuity and compatibility of route concepts and the connectivity of the state's transportation system.

The role of System Planning is two-fold. First, System Planning fulfills Caltrans statutory responsibility as owner-operator of the state highway system and serves as Caltrans principal mechanism for long-range transportation planning in both rural and urban areas. Second, it provides information for examining and analyzing the larger transportation system in the broader context of statewide mobility and intermodal connectivity. Within this dual role, System Planning: 1) identifies or supports and communicates highway capacity, operational, and new technology improvements and, where appropriate, intermodal and modal improvements, that optimize corridor capacity and improve regional and interregional mobility; 2) identifies and prioritizes improvements for recommendation into local and regional plans and pre-program activities (e.g. Major Investment Studies, Project Study Reports) resourced by local or regional agencies or Caltrans; 3) provides the basis for Caltrans priority setting for interregional highway improvements of statewide significance that Caltrans may consider nominating in the Proposed State Transportation Improvement Program (PSTIP); 4) provides information that will assist Caltrans in its intercity rail strategic planning efforts and in examining intercity rail improvements; 5) identifies, at a preliminary level, critical environmental and community concerns or compatibility issues related to proposed system improvements; 6) provides the basis for analyzing the impacts of local development on the state highway system and proposing appropriate strategies, improvements, and actions to minimize such impacts.

Coordination with Regional Transportation Planning Agencies (RTPAs), local land use, and environmental planning efforts occurs throughout the system planing process. The objective is local, regional, and state consensus on route or corridor concepts, improvement priorities, and strategies. Joint planning efforts lead to agreement on route or corridor concepts, improvement priorities, and strategies. Joint planning efforts lead to agreement on priorities and optimized use of constrained resources. Where the Regional Transportation Plan (RTP) adequately addresses Caltrans planning concerns and strategy options, a district may substitute the RTP for a system planning document

FIGURE 1 - Metropolitan Planning Organizations (MPO)

FIGURE 2 - Regional Transportation Planning Agencies (RTPA)

System planning activities typically produce the following documents:

- District Strategic Plan

  A District Strategic Plan (will replace the district System Management Plan) (DSMP) serves as an internal and external communications tool identifying Caltrans priorities and strategies for route and system improvement..

  The departmental Geographic Information System (GIS), Corporate Data Base, and the Intermodal Transportation Management System (ITMS) are integral and fundamental tools used in system planning and advanced planning activities. The ITMS provides an interactive, intermodal and multimodal, quick response transportation planning analysis tool for use in system planning

- Concept Reports and Fact Sheets

  A Route or Transportation Concept Report (RCA or TCR) identifies current operating conditions, future deficiencies, route concept and concept Level of Service(LOS) , and improvements for a route or corridor. A Fact Sheet contains current information found in an RCR, including the route concept, and is used for quick response activities within the Department and with local and regional agencies.

  The facility description element of the concept represents an initial planning approach for candidate improvements and determining estimated costs. All information in the RCR is subject to change in response to new information or conditions. The nature and size of identified improvements may be altered by subsequent system planning and project development. In conjunction with the regional planning process, decisions relating to mode choice are determined. This decision is normally made by the identification of a need for a corridor study, followed by a metropolitan investment study. As the process comes more near term, the results of the corridor study and investment study become the concept.

- System Development Programs

  A district Transportation System Development Programs (TSDP) identifies a reasonable comprehensive and effective range of transportation improvements on both state highways and in modal categories, strategies and actions, and demand and system management options that improve mobility

- Interregional Road System Plan

  The Interregional Road System Plan (IRRS) identifies projects on IRRS routes that will provide the most adequate interregional road system to all economic centers in the State. Under Section 164.3 of the Streets and Highways Code, proposed interregional road projects programmed in the STIP must be selected from this plan, except that the CTC may substitute projects if Caltrans concurs. The Plan is limited

to projects outside urbanized areas that primarily serve interregional travel, excluding traffic generated as a result of local growth. The plan identifies two subsystems, "High Emphasis Routes" and "Other Priority Routes".

- High Emphasis Routes are the major through, trunk line interregional routes that form the backbone of the State's highway network, connecting the major economic centers. They include all of the rural interstate routes plus 13 non-interstate routes. One of the major objectives of the plan is to develop these "High Emphasis Routes" to a defined minimum facility standard.

- Other Priority Routes provide the additional links to the State's other economic centers and main recreational areas. The projects on the "Other Priority Routes" are aimed at correcting current traffic service problems at spot locations and not at achieving a minimum facility standard for the whole route.

The plan identifies projects over a ten year period. The projects in the plan together stand as an interregional road system improvement, rather than a collection of scattered projects. Section 164.3 of the Streets and Highway Code requires construction of all projects to be started by June 30, 2000.

## Management Systems

An important part of the planning process which leads to identifying most projects in the SHOPP (State Highway Operation Protection Program) and the TSM (Traffic Systems Management) Plan are the various management systems. ISTEA mandated the establishment, development, and implementation of management systems.

Six management systems were originally required by ISTEA, to focus on the management of transportation system assets and on the performance aspects of the system. However, subsequent federal legislation changed the Management System requirements to options, except for a Traffic Monitoring System and the Congestion Management System. The original systems are listed below:

- Bridge
- Public transportation
- Intermodal
- Pavement
- Safety
- Congestion

The following existing Caltrans systems, which were to be incorporated into some of the ISTEA management systems, continue to be utilized:

- The Structures Replacement and Improvement Needs (STRAIN) report, which was to be incorporated into The Bridge Management System, is used for the HA21 bridge replacement program It is developed annually by the

Office of Structures Maintenance and Investigations of the Engineering Service Center (OSM&I-ESC) and is based on periodic inspections of all State structures. (A new system under development called PONTIS will replace STRAIN.) STRAIN contains recommendations of structure work to be done as determined by OSM&I-ESC, except for bridge strengthening which is determined by the District Permit Engineer.

- The Pavement Management System is used for the HM Major Maintenance Program and the HA22 Pavement Rehabilitation Program. It is based on the latest and prior Pavement Condition Surveys performed by the Maintenance Program on a continuous basis.

- The Safety Index (SI), which was to be incorporated into the Safety Management System, is used for the HB1 safety program. It utilizes a computerized interface with PMCS (Project Management and Control System) to identify locations with statistically high accident rates maintained in the TASAS (Traffic Accident Surveillance Analysis System) database. Locations are developed into projects to be constructed to improve or enhance safety and are then prioritized on the basis of a Safety Index.

Planning Regulations require a Congestion Management System for Transportation Management Areas with populations over 200,000. The Intermodal Transportation Management System Planning Tool was developed in response to the ISTEA requirements. These are both discussed below.

- The Congestion Management System used for the HB4 operational improvement program, HB5 HOV program, and HB6 ride sharing program is primarily the responsibility of the various Congestion Management Agencies in their Congestion Management Programs (CMPs). In order to receive State Flexible Congestion Relief, Urban or Commuter Rail and Traffic System Management funds, an urbanized county must prepare and adopt a CMP and update it annually.

- The Intermodal Transportation Management System (ITMS) Planning Tool is ideal for analyzing the performance of major corridor modal facilities up to completion of the Project Study Report stage of project development. Most Planning Tool generated performance measures serve as useful documentation for the Project Development process. The Planning Tool is used for identifying deficiencies and for performance-based evaluation of single actions and multiple-action strategies, such as one or more modal projects, system management changes, policy changes, or various combinations thereof. In this capacity, it is used to narrow down possible alternative solutions and to document performance measures for proposed and adopted solutions. The Planning Tool works within a desktop geographic information system. The Planning Tool is not an iterative network model. The modeling inputs used in the Planning Tool are from the Regional Transportation Planning Agencies.

Ideally, the ITMS Planning Tool is used to perform analyses in the planning process for:

- Long term planning to identify deficiencies and make performance-based evaluations of general regional and statewide and inter-regional intermodal strategies;

- Route Concept Reports and other corridor alternatives analysis (typically considered in the RTPs and the Regional Air Quality Plans) to examine deficient corridors and make performance-based evaluations of general intermodal strategies for the given corridor;

- Area Studies to examine deficiencies of an area's facilities and to support alternatives analysis and other performance-based evaluation of single-corridor and multiple corridor intermodal strategies for the area.

- Corridor Studies and transfer facility studies to examine deficiencies of corridors or route segments in corridors or near transfer facilities, and to make alternatives analysis and other performance-based evaluation of intermodal strategies for the corridor;

- Major Investment Studies and other studies which result in a recommended or proposed alternative, to make specific performance-based evaluations of alternatives addressing a targeted set of deficiencies or other problems; and

- Project Study Reports and other project defining reports, to provide performance-based evaluation of the strategy (a combination of actions, including a project or projects) chosen to improve system performance, and the degree of performance improvement, for purposes of documentation and project comparison. Documentation should include whether the results are from the project only, or from a multiple-project strategy, as projects may depend on one another for the full benefit of a combined strategy.

During Project Development and any point beyond the PSR, one would ideally refer back to Planning Tool deficiency levels and performance measures recorded in the PSR or other project-defining documentation.

In the absence of a previous ITMS analysis, the Planning Tool performance measures are still needed for documenting what improves and what worsens the degree of performance improvement. Therefore, it is recommended that the Planning Tool be used for performance - based evaluation of each project strategy (a combination of actions, including a project or projects) chosen to improve system performance. Additionally, the performance measures support other means of comparing projects. As with PSRs, documentation should include whether the results are from the project only,

or from a multiple-project strategy; as projects may depend on one another for the full benefit of a combined strategy.

Certain Planning Tool performance measures can be refined with the use of more accurate inputs available during project development; other performance measures should be disregarded in favor of better information. Refer to the Planning Program for further information on the ITMS Planning Tool.

## Master Plans

A number of programs are based on a prioritization of facilities identified in master plans. Master plans are developed and maintained by various divisions. A list follows:

- Safety Roadside Rests Master Plan used for the HB33 Roadside Rest program - Office of State Landscape Architecture, Design and Local Program

- Truck Weigh-Stations Master Plan used for a portion of the HA4 Protective Betterment program - Traffic Operations Program

- Facilities Master Plan used for (1) HA11 Equipment Shop program, (2) HA12 Maintenance Station program, (3) HA13 Office Building, Traffic Management Center, & Materials Laboratory program, and (4) HA14 Toll Collection Administration Facility program - all by the Asset Management Program in the Right of Way Program.

- Park & Ride Lots Master Plan used for the HB6 Ridesharing program - Traffic Operations Program

## Priority Lists

Projects for some programs are identified through a priority rating process. Priority Lists within a particular program rank projects as candidates for programming determined by some objective criteria. The *Project Candidate List Development Manual* for the current cycle should be consulted for detailed instructions for the development of priority index numbers for each program.

- Retrofit Soundwall (HB311) Program needs are identified and grouped into projects and included on the priority list in accordance with Section 215.5 and 215.6 of the Streets and Highways Code based on information contained in a current NBSSR. Ratings are based on the existing intensity of sound generated by freeway traffic, the cost of the project, the level of noise reduction attainable, and the number of residences affected. Highest consideration is given to residential areas that were developed prior to November 1974 and prior to the opening of the freeway or prior to a subsequent widening or other alteration of the freeway which resulted in a

significant and measurable increase in ambient noise levels. When new retrofit needs arise, Caltrans evaluates them for their eligibility under the Retrofit Soundwall Program; if eligible, they are then placed on the priority list. When noise problems are identified by individual property owners or local agencies, the Caltrans district should evaluate the location and determine its eligibility.

- Planting (HB32) Program, planting restoration (HA25) program, and roadside rest area restoration (HA26) program needs are identified based on criteria set by the Office of State Landscape Architecture.

- Seismic Retrofit (HA4S1, HA4S2, and HA4S3) Program needs are identified based on criteria set by the Division of Structures of the Engineering Service Center.

- Protective Betterment (HA42) Program needs are identified based on criteria set by the Maintenance Program.

Other programs, including those that are derived from system planning or regional planning, or those that are derived from the various remaining management systems, are also ranked on priority lists.

## State Highway Inventory

The State Highway Inventory is a computerized listing of segments of the State Highway System consisting of approximately 4000 segments, summarizing highway statistics and containing a description of the highways in terms of existing physical facility, system, and level of traffic service. It can be used as an indication of problem locations. The current "Route Segment Report" (published by the Transportation System Information Program) should be consulted for more information.

## Regional Transportation Planning

Regional Transportation Plans (RTPs) are important documents that lead to identification of projects. RTPs are State mandated documents developed or updated every two years by all 43 RTPAs (see Figure 2). They consist of policy, action, and financial elements. In regions designated as Metropolitan Planning Organizations (MPO) (see Figure 1) under federal law, the RTPs are also federally mandated. For an MPO, the RTPs also include long and short-range transportation system management activities. RTPAs and MPOs usually, but not always, cover the same territory and are normally a single organization where both are required. MPOs respond to the federal requirements while RTPAs respond to the State requirements.

## Air Quality Conformity

The linkage between transportation planning and air quality improvement was significantly strengthened with the passage of the federal Clean Air Act Amendments (CAAA) in 1990 and ISTEA in 1991. Transportation plans and programs are required to fully consider air quality impacts of transportation investments. Regional plans and programs are required to demonstrate air quality conformity in order for projects to proceed. The CAAA of 1990 and ISTEA require that a project's "design" concept and scope be specifically outlined in the MPO's long-range transportation plan.

In this manual ISTEA's "design" concept and scope is the "planning" concept and scope in the system planning stage. When updated with no significantly changes, the "planning" concept and scope becomes the "design" concept and scope and are used for the development of a project initiation document just prior to programming in a programming document (see Chapter 9, Article 2, for definitions of design concept and design scope).

## Planning Concept

The Planning Concept defines the type or mode of a facility; e.g., highway, transit, rail or combination which is proposed to meet a transportation need. For highway facilities this is refined to freeway, expressway, or conventional highway.

## Planning Scope

The Planning Scope for highway facilities addresses such issues as number of lanes, location and length of project, high occupancy vehicle (HOV) lanes, general interchange and intersection spacing. For transit or rail modes, it relates to the person-carrying capacity of the facility.

## Major Investment Studies

FHWA's and the Federal Transit Administration's (FTA) metropolitan planning rules implementing ISTEA require that a Major Investment Study (MIS) be completed prior to FHWA or FTA approval of any major investment within any metropolitan area if there is a "potential" for federal funds. The federal implementing regulations for ISTEA define a major transportation investment as a highway or transit improvement of substantial cost that is expected to have a significant effect on capacity, traffic flow, level of service, or mode share at the transportation corridor or sub-area scale.

The purpose of these studies is to assure that an adequate range of alternatives is considered when determining "design" concept, and scope. The MIS should also evaluate effectiveness and cost effectiveness of all alternatives. They are expected to be cooperative studies involving the MPO, Caltrans, local transportation agencies, and transit operators. These studies would be most effectively accomplished as part of the community's long range planning process, and should settle the question of mode of improvement prior to starting the project development process.

## District Input to Regional Transportation Plans

The district should be an active participant in developing the Regional Transportation Plans (RTPs) through its system and regional planning processes. The district, participating in the regional planning process, uses its system planning analyses and the District Strategic Plan (DSP) to facilitate State input into the RTPs. Conversely, the RTP is a critical source of information for the district when updating their DSP. Sections 65086, 65086.4, and 65086.5 of the Government Code allows the regions to adopt a future development list, which is the RTPA's financially prioritized list of capacity enhancing improvements on the State Highway System. This list is used for preparing Project Study Reports. (See Chapter 9, Article 1.)

## Regional Transportation Plan Purpose

As stated in the CTC's Regional Transportation Plan Guidelines, one of the purposes of a Regional Transportation Plan is to "identify transportation improvements in sufficient detail to aid in the development of the Federal Transportation Improvement Program (FTIP), the Regional Transportation Improvement Program (RTIP) and State Transportation Improvement Program (STIP), to be useful in making decisions related to the development and growth of the region and to permit an estimate of emissions impacts for demonstrating conformity with the State Implementation Plan (SIP) for achieving air quality standards." RTPs should include long-term (20 years or beyond) and short-term (up to 10 years) transportation improvement plans and objectives. Under ISTEA, MPO RTPs are required to be financially constrained. It is useful to also consider what should be done to meet identified needs beyond constrained funding. In nonattainment areas for federal clean air standards, the RTP is reviewed for conformity with the SIP at least every three years to assure that percentage reduction requirements for emissions are being met. Projects are prioritized and defined with enough specificity of design concept and scope to facilitate a finding of system conformity with the SIP.

The RTP contains a map showing the short-range and long-range recommended improvements and additions to the regional highway system increasing capacity and improving operational efficiency of the network. Maps are developed to illustrate the existing, short-range and long-range levels of service for routes of regional significance based on the recommended improvements. The maps include the locations of locally agreed upon interchanges on existing or planned freeways.

RTPs address freight and air cargo movements, freight distribution routes, and international border crossing improvement projects. They contain an airport ground-access improvement program in regions with a primary air carrier airport (a facility with 10,000 or more enplanements a year.) They also clearly define port access projects in terms of scope, cost and delivery schedules.

Federal air quality conformity rules require that projects included in a conforming RTP be limited to those with identified reasonably available funding sources. RTP projects within air quality non attainment areas are limited to those which have reasonably available funding sources identified. Other necessary projects included in an unconstrained needs list are not considered part of a conforming RTP.

An RTP is considered a project under CEQA and must meet specific CEQA requirements. The RTP must clearly document that it has been prepared in compliance with CEQA. In nonattainment areas (see Figure 3) projects must be described in a conforming RTP before they can be programmed in a FTIP. An Air Quality Conformity Assessment statement is required. This statement is a finding of conformity to the State Implementation Plan.

## NEPA / 404 Memorandum of Understanding

The states of California, Nevada, and Arizona have signed a Memorandum of Understanding (MOU) with several federal agencies regarding the integration of the National Environmental Policy Act (NEPA) with Section 404 (b)-1 of the Clean Water Act, which provides the Army Corps of Engineers with guidelines for issuing fill permits. The objective of the MOU is to gain the concurrence of all agencies at each transportation development phase (plan, program, project) before going on to the next phase.

Avoidance of large or special aquatic resources is best addressed at the systems planning stage. The RTP with its EIR, and corridor and sub-area studies are appropriate vehicles in which to assess system design alternatives and their environmental effects, including system management strategies and the mode, general location, and capacity for the proposed regional transportation facilities, the need and purpose, the cost, and the "design" concept and scope. System design decisions, documented to support later project decisions, if sufficiently detailed to address the information requirements of NEPA and Section 404, and if responsive to the regulatory requirements of NEPA and 404, allows the reviewing agencies to concur with the decisions.

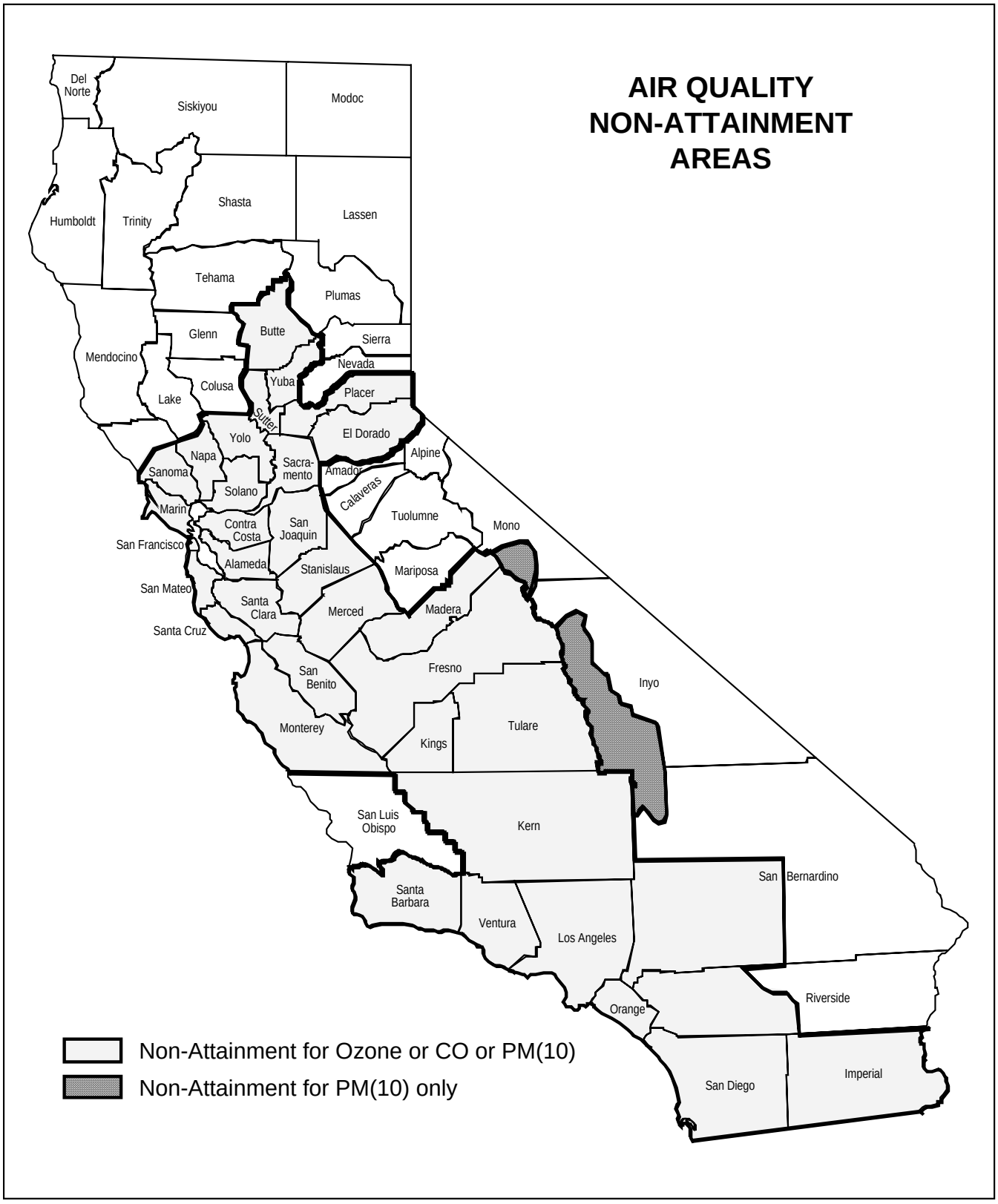
## Local Transportation Planning

Caltrans, in cooperation with participating agencies, facilitates a coordinated planning process with local governments, large scale public and private transportation providers, operators of major intermodal terminals and multi-state businesses. This cooperation and coordination is reflected in consistency between transportation decision making, applicable short and long-range land use plans, development plans, and the effect of transportation decisions on land use and land development.. Coordination in consideration of intermodal facilities with land use planning is also coordinated between Caltrans and local agencies.

## Goods Movement

Caltrans has worked closely with the freight industry in recent years through the Statewide Intermodal Goods Movement Advisory Committee (SIGMAC) and freight advisory councils of various MPOs and RTPAs to address freight transportation needs in planning and programming. Several freight and border crossing studies to improve the efficiency of goods movement have been conducted.

FIGURE 3 - Air Quality Non-Attainment Areas



## Other Plans

Other plans and programs needing coordination include Congestion Management Programs, Capital Improvement Programs, and air quality plans such as the Air Quality Attainment Plan, the Air Quality Maintenance Plan, and the State Implementation Plan.

# ARTICLE 4 - Corridor Planning

## Corridor Policy

It is Caltrans policy to work on a partnership basis with local land use authorities to accomplish early identification of transportation corridors and to explore all appropriate means for the acquisition and preservation of those corridors. See Director's Policy Memo DPM-91-1.

## Corridor Preservation

Corridor preservation is essential if an adequate transportation infrastructure is to be provided in support of a strong and vital economy. A partnership between federal, State, regional and local jurisdictions and the private sector is needed to plan for future needs and to share in the cost of meeting this responsibility. Since transportation mutually benefits all citizens, this policy relies heavily on successful negotiations between State, regional and local jurisdictions and the private sector to achieve its goal.

The State, in cooperation with participating organizations, provides for a fully coordinated process, including measures to preserve rights of way for construction of future transportation projects.

## Corridor Preservation Process

The corridor preservation process has the following four phases:

**Phase 1 - Identify Need For Corridor**

Regional transportation plans, county and city general plans, corridor studies for future transportation facilities, DSMPs and Route Concept Reports (RCRs) should identify potential opportunities for corridor preservation. Opportunities for all transportation modes should be considered. The district should work cooperatively with regional and local jurisdictions in identifying corridors.

**Transportation Corridor Fact Sheet:** When the tentative need has been identified, a Transportation Corridor Fact Sheet should be prepared by the District Transportation Planning Unit listing the need, description, issues, etc. of establishing the corridor.

**Phase 2 - Corridor Environmental Review**

A corridor environmental review is conducted to identify the potential impacts of alternative transportation facilities within a corridor. All elements such as need, purpose, issues, etc., must be discussed.

**Phase 3 - Include Corridor in RTPs and Local General Plans**

The district will work with appropriate federal, regional, local, and private entities to include the corridor in the RTP and in local general plans. The Regional Transportation Planning Agency (RTPA) may use the information from the Corridor Environmental Review in developing their environmental document for the RTP, and where appropriate, the Major Investment Study (MIS). Modes for the corridor should be realistically evaluated based on the overall modal planning in the general plan. An adequate corridor width should be estimated to accommodate future transportation needs.

**Phase 4 - Preserve Corridor**

State and local jurisdictions have authority to preserve corridors through a variety of means. The entire land-use approval process contains many opportunities for local jurisdictions to condition approval for development. Care should be taken not to interfere with the use of or access to and from private property.

Preservation would normally be funded and carried out by the local agency based on the inclusion of the transportation corridor in the general plan. This could lead to the development of a Precise Plan and of an Amendment to the Circulation Element of the local General Plan. A State route adoption would not normally be part of the process. The adoption of a route location by the CTC would only be appropriate when the result of the corridor study is a recommendation to implement an improvement that includes the highway mode and when funding for construction, or, at a minimum, for right of way acquisition, has been programmed or committed.

# SECTION 5 - Project Development Philosophy

## Balanced Transportation Projects

The project development process seeks to provide the people of California with a degree of mobility that is in balance with other values. It must ensure that economic, social, and environmental effects are fully considered along with technical issues, so that the best interests of the public good are served. Attention must be given to issues like the following:

- Safe and efficient transportation
- Attainment of community goals and objectives
- Transportation needs of low mobility and minority groups
- Support of the State's economic development
- Eliminating or minimizing adverse effects on the environment, natural resources, public services, aesthetic features, and the community
- Realistic financial estimates
- Cost effectiveness

Individual projects are selected for construction on the basis of overall system benefits as well as community goals, plans and values. Decisions place emphasis on making different transportation modes work together effectively.

## Various Perspectives Considered

Proper consideration of these issues requires that a facility be viewed from the perspectives of the user, the nearby community, and larger regional and State-wide interests. For the user, efficient travel and safety are paramount concerns. At the same time, the community often is more concerned about local aesthetic, social, and economic impacts. The general population, however, tends to be interested in how successfully a project functions as part of the overall transportation system, as well as how large a share of available capital resources it consumes.

## Implementation

Policies and procedures for implementing the project development philosophy are contained in subsequent sections of this manual, as well as in the *Environmental Handbook*. Implementation of the project development process depends on the following five elements:

- Project Development Teams

  Studies on major projects must be guided by multidisciplinary teams. As appropriate, the teams include representation from other agencies and the public. (See Chapter 8, Section 3.)

- Social, Economic, & Environmental Considerations

  Social, economic, and environmental issues must be considered in parallel with engineering and technical studies. Their consideration is an integral part of the project development process and is to be reflected from the very beginning of studies. (See Chapter 10, Section 3.)

- Alternatives

  A full range of reasonable alternatives should be investigated to ensure that tradeoffs and opportunities are identified that will provide the best, balanced solution for the transportation need. This includes supporting local and regional goals, providing community and environmental enhancements, and mitigating for unavoidable adverse effects. (See Chapter 8, Section 5 and Chapter 10, Section 4.)

- Community Involvement

  Districts must maintain continuing communication with affected governmental agencies. A program of two-way communication with community groups and citizens should be developed, when appropriate. Special effort should be made to seek the involvement of minorities and low-mobility groups. (See Chapter 22.)

- Project Work Plan

  A Project Work Plan provides an overview of the proposed project goals and the proposed project's scope, schedule, and resource requirements (dollars and personnel). The plan also informs project personnel of their responsibilities and their roles in relation to others working on the same project. The plan is prepared and updated by the Project Manager. See also "Initial Project Initiation Steps" in Chapter 8, Section 1 of this manual.